Remarks/Arguments

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 42-49 are presently active; Claims 24 and 32-41 having been canceled without prejudice or disclaimer, and Claims 42-49 having been added by the present amendment. Support for new Claims 42-49 can be found at least on page 46, lines 22-24; on page 31, lines 4 and 5; and in Figures 1 and 4 of Applicants' specification. No new matter has been added by the present amendment.

In the Office Action, Claims 24, 32, 35, 36, 38, and 40 were rejected under 35 U.S.C. 102(b) as being anticipated by Hiroshima et al. (U.S. Patent No. 5,801,781; hereinafter "Hiroshima"). Claims 24, 35, 36, 38, and 41 were rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (U.S. Patent No. 6,470,135; hereinafter "Kim"). Claim 37 was rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Niijima et al. (U.S. Patent No. 5,903,314; hereinafter "Niijima"). Claims 33, 34, and 39 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroshima (incorrectly indicated as Kim in the Office Action) in view of Kawakami et al. (U.S. Patent No. 5,991,502; hereinafter "Kawakami"). Claims 33, 34, and 39 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Kawakami.

Claims 24 and 32-41 have been canceled by way of the present amendment. Therefore, rejections pertaining to the same have been rendered moot. However, the distinctions between new Claims 42-49 and Hiroshima and Kim, which were both cited as anticipating references and as primary references in the Office Action, will be addressed below.

New Claim 42 recites, among other features:

> ...a management area, separate from the data area, configured to store size information of said data unit, wherein,
> said data unit contains information of a transport packet of the MPEG transport stream, and
> the information of said transport packet includes a random access indicator configured to be supported if a special playback mode based on the I-picture is set, the information of said I-picture being recorded in unit of said data unit whose size can be indicated by the size information stored in the management area.[1]

Referring to the drawings of the present application as non-limiting examples, the size information of a data unit can correspond to SOBU_SIZ in Figure 9(f), the transport packet can correspond to TS PACKET in Figure 4, and the random access indicator can correspond to RANDOM ACCESS INDICATOR (AUSM) in Figure 1(c).

New Claim 43 recites, among other features:

> ...a management area, separate from the data area, configured to store size information of said data unit, wherein,
> said data unit contains information of a transport packet of the MPEG transport stream, and
> the information of said transport packet includes a unit start indicator configured to specify a start address of information of the I-picture, the information of said I-picture being recorded in unit of said data unit whose size can be indicated by the size information stored in the management area.[2]

Referring to the drawings of the present application as non-limiting examples, the size information of a data unit can correspond to SOBU_SIZ in Figure 9(f), the transport packet can correspond to TS PACKET in Figure 4, and the unit start indicator can correspond to UNIT START INDICATOR in Figure 1(b).

Neither Hiroshima nor Kim teaches or renders obvious all of the features of either new Claim 42 or Claim 43.

Hiroshima discloses an apparatus for converting a MPEG1 data stream into a MPEG2 data stream without the use of a MPEG2 encoder.[3] Hiroshima is directed to a converting apparatus and does not appear to include any detailed description of an information storage

[1] Specification at new Claim 42, lines 4-10.
[2] Specification at new Claim 43, lines 4-10.
[3] Hiroshima at Abstract, lines 1-8, and at col. 2, lines 10-30.

medium including a data area configured to store an MPEG transport stream. More particularly, Hiroshima does not disclose or suggest an information storage medium including a data area including a random access indicator, and a management area including a size information of a data unit, as recited in new Claim 42. Regarding new Claim 43, Hiroshima does not disclose or suggest an information storage medium including a data area including a unit start indicator, and a management area including a size information of a data unit. Instead, Hiroshima is solely directed to the processing of audio-video data streams by a converting apparatus. As such, Hiroshima does not disclose or suggest either of new Claims 42 and 43.

Kim is directed to the recording of digital data streams and discloses a recording medium that records both digital data streams and management information pertaining to the recorded streams.[4] However, exactly where such information, relative to each other, is recorded in Kim is not disclosed. From the disclosure of Kim, the management information SOBU_MAP (including SOBU_SZ) may be (or could be) recorded in an object area (for recording TS packets) of a disc.

On the other hand, as shown in Figure 9(d) of the present invention, control information (management information) is recorded in an area other than the object area (for VIDEO OBJECT Figure 9(d)). Thus, the claimed management area is separate from the data area. Such a player allows a player (where the player part of a string recording apparatus) to read the management information prior to the start of reproducing the stream data in the data area. When the player reads the management information to pre-load in its memory before started the object data reproduction, the player can quickly know the contents of the management information at any time (e.g., at the time when Fast-Forward or Fast-Reverse is to be started).

[4] Kim at Figure 1 (recording medium 230) and at col. 3, lines 16-50.

According to the embodiment of Figures 17-21 of the present invention, the management information is first read (steps S35-S37), and the playback recorded contents (TS packets) is performed thereafter (steps S47-S53). It is difficult to achieve such operations if the management information (SOBU_SZ, etc.) is mixed with the object data (TS packets) in the object recording area.

For at least the reasons discussed above, Applicants submit that new Claims 42 and 43 are patentable over Hiroshima and Kim. Because new Claims 44, 46, and 48 recite all of the features of new Claim 42, and because new Claims 45, 47, and 49 recite all of the features of new Claim 43, these claims are also patentable over Hiroshima and Kim.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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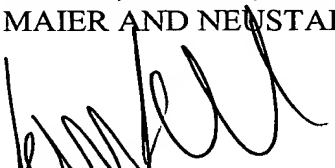

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